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10/625,008	07/23/2003	David Drew Morris	2080D	8433

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Legal Department, M-495
PO Box 1926
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EXAMINER

BOUTSIKARIS, LEONIDAS

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,008

Applicant(s)

MORRIS, DAVID DREW

Examiner

Leo Boutsikaris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 41-128 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-14, 66-80, 109-111, 115-121 and 125-128 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 15-18, 41-45, 47-50, 52, 56, 57, 63, 81, 82, 84, 85, 90-93, 98 and 100 is/are rejected.
- 7) ☒ Claim(s) 5, 8, 9, 46, 51, 53-55, 58-62, 64, 65, 83, 86-89, 94-97, 99, 101-108, 112-114 and 122-124 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/11/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Species I in the reply filed on 5/27/05 is acknowledged.

Claims 19-40 have been cancelled. Examination of claims 1-18, 41-128 follows.

Claim Objections

Claims 112-114, 122-124 are objected to because of the following informalities:

In claims 112, 112, line 2, the word "denier" should be inserted before the word "from", for better clarity.

In claims 113, 123, line 2, the word "remaining" should be inserted before the word "open", for better clarity.

In claims 114, 124, line 3, the phrase "that of" should be inserted after the word "than", for better clarity.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 90-93, 98 are rejected under 35 U.S.C. 102(b) as being anticipated by Conti (US 5,027,864).

Regarding claims 90, 98, Conti discloses an innerduct structure comprising various tubular members 30, each member made from a single sheet of flexible material, such as synthetic plastic, defining a longitudinal channel and enclosing and carrying cable 50; wherein a cable 50 is positioned within at least one of the members 30. The innerduct structure is positioned within the conduit 10 (Fig. 2, lines 44-46, col. 2, line 68, col. 6).

Regarding claim 91, a plurality of innerduct structures are positioned within the conduit (Fig. 2).

Regarding claims 92-93, a pull line is used to insert the cable into the inner duct (lines 45-57, col. 6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 81-82, 84-85, 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conti (US 5,027,864).

Regarding claim 81, Conti discloses an innerduct structure comprising various tubular members 30, each member made from a flexible material such as synthetic plastic, and defining

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a longitudinal channel; wherein a cable 50 is positioned within at least one of the members 30. The innerduct structure is positioned within the conduit 10 (Fig. 2, lines 44-46, col. 2, line 68, col. 6). Conti teaches that the inner ducts are pulled within the conduit by using pull lines (Fig. 5). However, Conti discloses that one way to insert an object, such as a pull line 37, into a hollow, tubular member, such as inner duct 30, is by using pneumatic pressure (lines 35-40, col. 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use pneumatic pressure to insert the tubular, flexible inner ducts inside the hollow conduit, instead of using pull lines, since the latter requires a separate line for each inner duct (see Fig. 2), and additional components such as chains 42.

Regarding claim 82, the plastic material comprising inner ducts 30 is impervious to air.

Regarding claim 84, a pull line is used to insert the cable into the inner duct (lines 45-57, col. 6).

Regarding claim 85, the inner duct 30 is made from a single sheet (lines 19-21, col. 4).

Claims 1-4, 6-7, 15-17, 41-45, 47-48, 50, 52, 56-57, 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ford (US 5,413,149) in view of Conti (US 5,027,864).

Regarding claims 1-2, Ford discloses a flexible structure 10 configured to enclose and carry at least one cable, said structure comprising textile material defining one longitudinal channel configured to enclose and carry a cable, wherein the material has warp yarns 14 and fill yarns 13, which may comprise a combination of polyester and polyamides (i.e., nylon), see Fig. 1, lines 30-33, col. 2, lines 5-19, col. 6, lines 17-21, col. 10). However, Ford does not explicitly disclose means for pulling a cable into the structure 10. As described supra, Conti teaches that a

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pull line can be used to insert a cable into a hollow tubular conduit. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a pull line to position a cable into the flexible structure of Ford, since said method is a simple, yet accurate way to insert a cable into a hollow sleeve.

Regarding claims 3, 17, Ford in view of Conti does not explicitly teach that the sleeve 12 and the cable being pulled within the sleeve have substantially equal values of elongation percentage for a given tensile load. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use materials for the cable its respective sleeve with similar elongation properties, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235. Here, both the cable covering sheath and the sleeve comprise plastics, and similar elongation properties for the two components would prevent deformation and mechanical wear during the pulling process.

Regarding claim 4, the material 12 is a woven fabric (defined as any material comprised of interlaced filamentary components, see lines 22-23, col. 3 in Ford).

Regarding claims 6, 15-16, the structure 12 is formed from a single sheet of the textile material (see Fig. 3).

Regarding claim 7, the structure 12 is flexible, resiliently biased toward an open channel configuration (see Fig. 2), and inherently collapsible in a transverse direction.

Regarding claims 41-45, 47-48, 50, 52, 56-57, 63, the sleeve 10 is formed such that one longitudinal edge is folded over a second longitudinal edge and attached thereto (Fig. 3).

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Claims 15-18, 41, 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller (US 6,178,278) in view of Conti (US 5,027,864).

Regarding claims 15-16, 41 Keller discloses a flexible structure 104 configured to enclose and carry at least one cable 102, said structure comprising textile material defining one longitudinal channel configured to enclose and carry a cable, wherein the material comprises a yarn matrix (Fig. 1, lines 36-61, col. 6). However, Keller does not explicitly disclose means for pulling a cable into the structure 104. As described supra, Conti teaches that a pull line can be used to insert a cable into a hollow tubular conduit. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a pull line to position a cable into the flexible structure of Keller, since said method is a simple, yet accurate way to insert a cable into a hollow sleeve.

Regarding claim 17, Keller in view of Conti does not explicitly teach that the sleeve 104 and the cable being pulled within the sleeve have substantially equal values of elongation percentage for a given tensile load. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use materials for the cable its respective sleeve with similar elongation properties, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235. Here, both the cable covering sheath and the sleeve comprise plastics, and similar elongation properties for the two components would prevent deformation and mechanical wear during the pulling process.

Regarding claims 18, 49, the flexible structure 104 is disposed within a conduit 110.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 10, 15, 41, 66, 81, 90, 109, 119 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6, 65, 5, 32, 43 of U.S. Patent No. 6,304,698. Although the conflicting claims are not identical, they are not patentably distinct from each other because the former claims are broader versions of the latter claims.

Allowable Subject Matter

Claims 112-114, 122-124 would be allowable if rewritten to overcome the objections, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 5, 8-9, 46, 51, 53-55, 58-62, 64-65, 83, 86-89, 94-97, 99, 101-108 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 10-14, 66-80, 109-111, 115-121, 125-128 are allowed.

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Claims 5, 8-14, 46, 51, 53-55, 58-62, 64-80, 83, 86-89, 94-97, 99, 101-128 are allowable over the prior art of record for at least the reason that even though the prior art discloses flexible cable inserts made from plastic or foil and having a star-type configuration, or flexible textile cable sleeves, the prior art fails to teach or reasonably suggest, regarding claims 8-9, a flexible structure enclosing at least one cable and comprising polyester warp yarns and nylon fill yards disposed within a conduit, regarding claims 5, 10-14, a flexible structure enclosing at least one cable and comprising polyester warp yarns and nylon fill yards disposed within a conduit, with the claimed values for the yarn denier, regarding claims 46, 51, 53-55, 58-62, 64-65, a flexible structure enclosing at least one cable and comprising a single sheet of textile material, with the claimed properties for the yarn denier, melting temperature, crimp resistance recovery angle, tensile strength, elongation percentage, friction, and burn characteristics, regarding claims 66-80, a flexible insert for cable conduits with the claimed properties for elongation and longitudinal tensile strength, regarding claim 83, a method for dividing a conduit into multiple channels comprising the step of providing a flexible innerduct structure with the claimed properties for the melting temperature, regarding claims 86-89, a method for dividing a conduit into multiple channels comprising the step of providing a flexible innerduct structure comprising weaved yarns and blowing the structure into a conduit using pneumatic pressure, regarding claim 94, a method for dividing a conduit comprising the step of providing a flexible innerduct structure made from a single sheet to enclose at least one cable, wherein the innerduct structure includes a plurality of longitudinal channels, regarding claims 95-97, a method for dividing a conduit comprising the step of providing a flexible innerduct structure made from a single sheet to enclose at least one cable, wherein the innerduct structure comprises weaved yarns, regarding

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claim 99, a method for dividing a conduit comprising the step of providing a flexible innerduct structure made from a single sheet to enclose at least one cable, wherein the innerduct structure and the cable have the claimed melting properties, regarding claims 101-108, a method for dividing a conduit comprising the step of providing a flexible innerduct structure made from a single sheet to enclose at least one cable, wherein the innerduct structure has the claimed properties for the elongation, crimp resistance recovery angle, burn characteristics, and friction, regarding claims 109-128, a cable receiving assembly comprising a woven innerduct having a single strip of fabric material, as set forth by the claimed combination.

Gaeris (US 5,789,711, Fig. 1), Simmons (US 3,911,200, Fig. 11), Boucino (US 5,969,295, Fig. 2) disclose cable inserts having a star-type configuration and made from non-woven polymer or foil material. Similarly, Allen (US 5,442,136, Figs. 1-2) discloses a flexible cable plastic insert having an undulating form.

Conaghan (US 4,929,478, Fig. 4), and Kite (US 4,862,922, Fig. 3) disclose flexible cable sleeves made from weaved polyester yarns.

Finally, it is noted that in Keller's device, flexible structure 104 enclosing the cable 102, is not an insert to the cable assembly.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Leo Boutsikaris whose telephone number is 571-272-2308.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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August 16, 2005



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